Remarks

Basis for Amendments

In the claims, claims 1, 7, 9, 18, 24, 28, 30 and 32 have been amended to further

distinguish Applicants' claimed invention and to enable allowance of these claims. Claims 6, 8,

10, 23, 27, 29 and 31 have been canceled. The amendment to independent claim 1 comprises

including the elements of canceled dependent claims 6, 8 and 10 in claim 1. Dependent claims 7

and 9 have been amended to depend on claim 1 rather than canceled claim 6. The amendment to

independent claim 18 comprises including the elements of canceled dependent claims 8, 10, and

23 into claim 18. The amendment to independent claim 24 comprises including the elements of

canceled dependent claims 27, 29 and 31 into claim 24. Dependent claims 28 and 30 have been

amended to depend on claim 24 rather than canceled claim 27. The amendment to independent

claim 32 comprises including the elements of canceled dependent claims 27, 29 and 31, and the

second element of claim 24 into claim 32. There are a number of claimed features that

distinguish the present claimed invention, as amended, from the cited reference, as described

below The claim amendments are fully supported by the specification as filed.

Response to Claim Rejections Under 35 U.S.C. §102(a)

The following issue is presented: Whether claims 1-34 are anticipated under 35 U.S.C. §

102(a) as being anticipated by Sacks (U.S. Patent No. 5,974,407)? If examination at the initial

stage does not produce a prima facie case of unpatentability, then without more, the applicant is

entitled to the grant of the patent. See *In re Oetiker*, 977 F. 2d 1443 (Fed. Cir. 1992). Under 35

U.S.C. § 102, anticipation requires that there is no difference between the claimed invention and

reference disclosure, as viewed by a person of ordinary skill in the field of the invention. See

Scripps Clinic & Research Foundation v. Genentech, Inc., 927 F.2d 1565. Anticipation requires

the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. In deciding the issue of anticipation, the trier of fact must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly anticipating reference. *See Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452.

In the present case, the Office asserts that Applicants' claims 1-34 are set forth in Sacks. As more fully set forth below, Applicants contend that the findings on anticipation by the Office are clearly erroneous based on a failure to identify the elements of the claims, to determine their meaning in light of the specification, and to identify corresponding elements disclosed in the allegedly anticipating reference of Sacks. Applicants contend that the Office has not shown the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. Therefore, the rejection of these claims should be withdrawn.

It should be noted that the differences between Applicants' invention and the Sacks reference arise from the fact that the Applicants' claimed invention does not rely on the features embedded in a relational database management system to produce a hierarchical data structure, while Sacks discloses a method that relies on linking keys between relational tables in a relational database management system to produce a hierarchical data structure. Applicants' disclosed invention is not limited to use with a relational database management system, but is capable of translating a relational data structure, absent a management system, into a hierarchical data structure without the use of a relational database management system. Applicants' invention relies on defined data paths and element names for determining hierarchical data structure, not composite keys unique over all tables in a relational database management system. Since the

Office has failed to establish that there is no difference between the Applicants' claimed

invention and the reference of Sacks, the Applicants requests withdrawal of the rejections and

reconsideration of the patent with respect to the above-referenced claims.

Discussion of Claim Rejections Under 35 U.S.C. § 102(a)

As noted above, there may be similarities between the hierarchical result produced by

Applicants' claimed invention and the hierarchical result produced by the method disclosed in

the Sacks reference, but the method used between the initiation and result of the two disclosures

are patentably distinct from one another. That is, the means of accomplishing the result in the

two disclosures are distinguishable from one another. This is evidenced by the fact that every

element of Applicants claimed invention, arranged as in the claims, are not found in the Sacks

reference cited by the Office.

Regarding the first element of independent claims 1, 18 and 24 (currently amended), there

is no teaching or suggestion in the Sacks reference for "defining a hierarchical data entity

including a plurality of simple and compound elements, comprising: identifying an entity path

and mapped fields in each simple element; and identifying an entity path, a database name, a

database command, and database fields in each compound element". As disclosed in Applicants'

invention in the descriptions of Figure 2 and Figure 3, the simple and compound elements of the

hierarchical data entity include attributes for identifying paths, fields, database and commands for

accessing data in a relational database to be transformed into mapped elements in a hierarchical

data structure. Unlike Applicants' method, the Sacks method relies on unique composite keys for

maintaining hierarchical relationships of data stored in a relational database management system.

There is no corresponding disclosure of this element, as arranged in Applicants claimed

invention, in the Sacks reference. The cited passages by the Office describe the Sacks method of

using composite keys and hkey values created in rows and tables of data storage tables for generating hierarchical views. There exist no correspondence between Applicants' claimed method and the Sacks disclosure.

Regarding the second element of independent claims 1, 18 and 24 (currently amended), there is no teaching or suggestion in the Sacks reference for "mapping each of the plurality of elements in the hierarchical data entity to information in a relational dataset contained in a relational database, comprising: for each compound element, specifying a data source, specifying a database command, executing the database command, receiving database field names from the relational database, and adding the database field names to the compound element; for each simple element, selecting a database field name in a parent element corresponding to the simple element, and specifying a data transformation algorithm associated with the simple element". As disclosed in Applicants' invention, this second element of claims 1, 18 and 24 rely on the attributes defined in the first claim element to map the simple and compound elements to datasets in the relational database and to specify a transformation algorithm for the simple elements. The passage in Sacks cited by the Office discloses mappings between rows in the hierarchical database storage tables using composite keys (hTable, hKey, and hNode) shown in Figure 8 and the hierarchical views shown in Figure 9. For mapping, Applicants disclose, for each compound element, specifying a database command, executing the database command, receiving database field names from the relational database, and adding the database field names to the compound element, and for each simple element, selecting a database field name in a parent element corresponding to the simple element, and specifying a data transformation algorithm associated with the simple element. There is no disclosure of theses elements in the cited passages of Sacks, and there is no corresponding element identified in the Sacks reference.

Regarding the third element of independent claims 1, 18 and 24 (currently amended), there is no teaching or suggestion in the Sacks reference for "transforming the relational dataset information into corresponding mapped elements in the hierarchical data entity to form a hierarchical data structure". Applicants are unable to find any disclosure in the Sacks reference of transforming dataset information into a hierarchical data entity to form a hierarchical data structure, as described in Figure 8 of Applicants' invention. The passage in Sacks cited by the Office describe children in a given row of a table that have the same value as the composite key hKey, and have an hNode string that is composed of the hNode string of the parent node. This passage bears no relation to any element of Applicants' claimed invention.

Regarding the fourth element of independent claims 1, 18 and 24 (currently amended), there is no teaching or suggestion in the Sacks reference for "accessing data from the hierarchical data structure corresponding to the relational dataset information in the relational database". The passage in Sacks cited by the Office describe SQL expressions for generating hierarchical views in relation to composite keys hKey and h Node.

Since every element of the claimed invention, arranged as in the independent claims 1, 18 and 24 (currently amended), is not found in the single prior art reference of Sacks, Sacks does not anticipate Applicants' independent claims 1, 18 and 24. Therefore the rejection of claims 1, 18 and 24 should be withdrawn.

Furthermore, claims 2-5, 7, 9, and 11-17 are either directly or indirectly dependent upon independent claim 1, claims 19-22 are either directly or indirectly dependent upon independent claim 18, claims 25, 26, 28, and 30 are either directly or indirectly dependent on independent claim 24, and claims 33 and 34 are directly dependent upon independent claim 32. These dependent claims incorporate all the limitations of the independent claims upon which they

depend while providing further unique and non-obvious recitations. Since the rejections of claims 1, 18 and 24 are not supported by the Sacks disclosure, the rejections of these dependent claims as anticipated are also not supported by the Sacks reference and should be withdrawn.

Regarding the rejection of dependent claims 2, 4, 19, 21, 25 and 26 (original), there is no teaching in the Sacks disclosure of the elements of these claims. The trier of facts must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly anticipating reference. The identification of the elements of these claims reveals that the elements include a hierarchical map structure and a hierarchical data entity. A hierarchical map structure is described in relation to Applicants' Figure 2, where compound elements include attributes of an Entity Path, Database Name, Database Command, and Database Fields. Simple Elements shown in Figure 2 include Entity Path and Mapped Fields. There are no corresponding compound elements disclosed in Sacks that include an Entity Path, Database Name, Database Command, and Database Fields. Nor are there corresponding simple elements disclosed in Sacks that include Entity Path and Mapped Fields. Since the element of a hierarchical map structure cannot be fond in Sacks, the rejection of these claims should be withdrawn. Furthermore, a hierarchical data entity is described in relation to Applicants' Figure 3, where compound elements include attributes of an Element Name, Database Name, Database Command, and Database Fields. Simple Elements shown in Figure 3 include Element Name and Mapped Fields. There are no corresponding compound elements disclosed in Sacks that include an Element Name, Database Name, Database Command, and Database Fields. Nor are there corresponding simple elements disclosed in Sacks that include Element Name and Mapped Fields. Since the element of a hierarchical data entity cannot be fond in Sacks, the rejection of these claims should be withdrawn. Contrary to the

passages cited by the Office, there is no disclosure in Sacks of a hierarchical map structure or a hierarchical data entity, as disclosed by Applicants. For an example of the patentable distinctions between Applicants' invention and the Sacks reference, compare Figures 1A-1E and Figures 9A and 9C cited by the Office with Applicants' Figures 2 and 3 that reflect the embodiment of claims 2, 4, 19, 21, 25 and 26. The comparison reveals significant patentable differences in the disclosed attributes of Sacks hierarchical elements and the attributes of the hierarchical elements disclosed and claimed by Applicants. Therefore, the rejection of claims 2, 4, 19, 21, 25 and 26 should be withdrawn.

Regarding the rejection of claims 3 and 20 (original), a comparison of Applicants' Figure 3 with the Sacks reference Figure 9A-9C cited by the Office reveal patentably distinguishable features of Applicants claim 3 and 20. Therefore, the rejection of claims 3 and 20 should be withdrawn.

Regarding the rejection of claims 5 and 22 (original), there is no disclosure in the Sacks disclosure, and particularly with respect to Sacks' Figures 1B-1D, of identifying each of the plurality of elements by an entity path referencing all parent elements in the entity path. Therefore, the rejection of claims 5 and 22 should be withdrawn.

Regarding the rejection of claims 6, 23 and 27 (canceled), Applicants have canceled these claims and included the elements of these claims into the corresponding independent claims 1, 18 and 24, respectively.

Regarding the rejection of claims 7, 8, 28 and 29 (currently amended and canceled), Applicants have canceled claims 8 and 29 and included the elements of canceled claims 8 and 29 into the corresponding independent claims 1 and 24, respectively. There is no disclosure of

claims 7 and 28 (currently amended) in Figures 1D-1E in the Sacks reference, as cited by the Office. Therefore, the rejection of claims 7 and 28 should be withdrawn.

Regarding the rejection of claims 9, 10, 30 and 31 (currently amended and canceled), Applicants have canceled claims 10 and 31 and included the elements of canceled claims 10 and 31 into the corresponding independent claims 1 and 24, respectively. There is no disclosure of claims 9 and 30 (currently amended) in Figures 1E in the Sacks reference, as cited by the Office. Therefore, the rejection of claims 7 and 28 should be withdrawn.

Regarding the rejection of claim 11 (original), there is no teaching in the Sacks reference that identifies the elements of Applicants' claim 11, which claims the step of mapping the plurality of elements recited in claim 1. To illustrate this lack of teaching or suggestion, the following is a comparison of each element of claim 11 with the passage in Sacks cited by the Office that allegedly includes each element of claim 11. The first element of Applicants' claim 11 recites, "reading the hierarchical data entity" and the cited Sacks passage reads, "The upper third of FIG. 4, Specify Hierarchical Database 4-10, denotes the process where the developer enters data into the fields of tables defined in FIG. 3A." The first element recites a first step of a computer process of reading an existing hierarchical data entity, while the cited passage recites a manual definition of fields defined in FIG. 3A. The first element of Applicants' claim 11 is patentably distinguishable from the Sacks passage cited by the Office. Furthermore, the fields shown in FIG. 3A bear no relationship or meaning with regard to Applicants claimed and disclosed invention. The second element of Applicants' claim 11 recites, "determining if a root element is present" and the cited Sacks passage reads, "4-16 Specify Root and Child Conditions - This specifies the conditions, referred to as root conditions and child conditions 3A-12 for adding root and child rows." Applicants' second element of claim 11 is patentably distinguishable from

the Sacks passage cited by the Office. The third element of Applicants' claim 11 recites, "ending the mapping process if no root element is present" and the cited Sacks passage reads, "4-16 Specify Root and Child Conditions - This specifies the conditions, referred to as root conditions and child conditions 3A-12 for adding root and child rows." Applicants' third element of claim 11 is patentably distinguishable from the Sacks passage cited by the Office. The fourth element of Applicants' claim 11 recites, "mapping each compound element of the plurality of elements if a root element is present" and the cited Sacks passage reads, "4-18 Specify Tables and Fields - This block specifies the tables 3A-10 and their fields 3A-14, which store the rows of data of the hierarchical database." Applicants' fourth element of claim 11 is patentably distinguishable from the Sacks passage cited by the Office, since there is no suggestion of the conditional statement "mapping compound elements if a root element is present" in the cited Sacks passage. The fifth element of Applicants' claim 11 recites, "mapping each simple element of the plurality of elements if a root element is present" and the cited Sacks passage describes Figure 3A of Sacks with no disclosure of the conditional statement "mapping each simple element of the plurality of elements if a root element is present". Therefore, the fifth element of Applicants' claim 11 is patentably distinguishable from the Sacks passage cited by the Office. Since every element of Applicants claim 11 is distinguishable from the passages of Sacks cited by the Office, the rejection of Applicants claim 11 should be withdrawn.

Furthermore, with regard to claim 11 (original), which is a method claim for mapping each of a plurality of elements, "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." None of the elements of claim 11 are found in the Sacks reference "arranged as in the claim" to accomplish a mapping process. On this basis, the rejection of claim 11 should be withdrawn.

Regarding the rejection of claim 12 (original), there is no teaching in the Sacks reference that identifies the elements of Applicants' claim 12, which claims the step of mapping each compound element recited in claim 11. As recited above, "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." The elements of method claim 12 "arranged as in the claim" are completely lacking in the cited reference of Sacks. There is no disclosure of these steps in Sacks. Therefore, the rejection of claim 12 should be withdrawn.

Regarding the rejection of claim 13 (original), there is no teaching in the Sacks reference that identifies the elements of Applicants' claim 13, which claims the step of mapping each simple element recited in claim 11. As recited above, "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." The elements of method claim 13 "arranged as in the claim" are completely lacking in the cited reference of Sacks. There is no disclosure of these steps in Sacks. Therefore, the rejection of claim 13 should be withdrawn.

Regarding the rejection of claims 14-16 (original), there is no teaching in the Sacks reference that identifies the elements of Applicants' method claims 14-16, which claims the step of transforming the relational database information recited in claim 1. As recited above, "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." The elements of method claims 14-16 "arranged as in the claim" are completely lacking in the cited reference of Sacks. There is no disclosure of these steps in Sacks. Therefore, the rejection of claims 14-16 should be withdrawn.

Regarding the rejection of claims 32 (currently amended), there is no teaching in the Sacks reference that identifies the elements of Applicants' claim 32. As recited above,

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." The elements of claim 32 "arranged as in the claim" are completely lacking in the cited reference of Sacks. There is no disclosure of these elements in Sacks. Therefore, the rejection of claim 32 should be withdrawn.

Regarding the rejection of claims 33 and 34 (original), claims 33 and 34 are directly dependent upon independent claim 32, which has been shown above to be patentable. These dependent claims incorporate all the limitations of the independent claim 32 upon which they depend while providing further unique and non-obvious recitations. Since the rejection of claims 32 is not supported by the Sacks disclosure, the rejections of these dependent claims 33 and 34 as anticipated are also not supported by the Sacks reference and should be withdrawn.
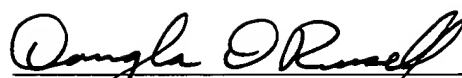
Summary

The responses detailed above rebut the assertions by the Office of anticipation of Applicants' invention, since all the elements of Applicants' claimed invention are not found in the cited reference of Sacks. The responses substantiate the novelty of claims 1-34 of Applicant's specification over the cited reference. Since the rejections are unsupported for failure to find all Applicants' claim limitations in the Sacks reference, the rejections should be withdrawn.

Applicants have made a diligent effort to distinguish the present invention over the referenced art and to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Douglas D. Russell, Applicants' Attorney at 512-338-4601 so that such issues may be resolved as expeditiously as possible. For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited. Reconsideration and further examination is respectfully requested.

Respectfully Submitted,

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